

2009 GOBBLE STUDY UPDATE

Thomas V. Dailey, Resource Scientist, Missouri Department of Conservation

For a third year gobbleteers got up in the dark and dutifully gathered data during March, April and May. Adding up all our work, we've listened on 11,136 mornings and heard 26,311 gobblers gobble 241,719 times! Some days have been great, others not so good:

March 25, 2007: "It's getting hard to drink coffee now. The fun started at 6:19. The gobblers have broken up it seems due to the different gobbling locations. There were still the owls that got things going but there was one bird that was double, triple and quadruple gobbling. Seven turkeys gobbled 245 times."

April 4, 2009: "Seven gobblers gobbled 200 times--OH MY GOSH WHAT A MORNING!!!"

April 22, 2009: "Heard 3 gobblers gobble 8 times. Turkeys are a hard animal to figure

Among the many sounds of spring, turkey gobbling is one of the highlights. For several hundred volunteers participating in a five-year study of turkey gobbling behavior, mid-March every year begins 8 weeks of collecting data. These "gobbleteers" listen for 20 minutes, 45 to 25 minutes before sunrise, at their permanent listening location, two mornings each week through the last Friday of the hunting season.

Not surprisingly there is a lot of variation in the amount of gobbling from day-to-day and place-to-place. On one day an observer might hear 400 gobblers from a dozen gobblers, only to return another day, especially in bad weather, and hear no gobbling. In the worst cases some observers

wanted to abandon their spots by the 3rd year because the turkeys disappeared. Such is the variation in turkey breeding behavior and Missouri's turkey numbers. For gobbleteers, however, even the 'zero' turkey days are rewarding due to the sights and other sounds before sunrise. A highlight for many observers is the aerial display of the woodcock.

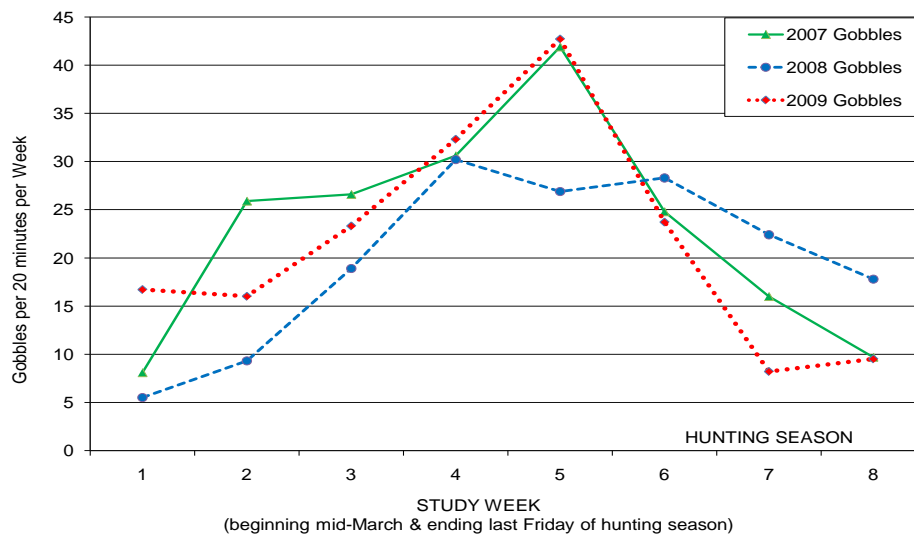
Preliminary data analysis shows our opening days of turkey hunting (April 16, 2007; April 21, 2008; April 20, 2009) are catching gobblers *after* the peak in gobbling, which on average occurs in mid-April (week 5, Figure 1). Although this might be disappointing to hunters, the season timing is a compromise between the short-term interest of hunters and what's best for turkeys. The season is timed to coincide with the onset of incubation by hens, usually starting around the 3rd week in April, ensuring that most hens have bred and many are on nests, protected from harvest. These birds are the source of the poults that replenish the population each year, so their protection is very important. Gobblers are more vulnerable in early April, and a later season ensures that we don't overharvest mature gobblers—this is in the *long-term* interest of hunters.

Although gobbling has peaked before the hunting season, gobbling patterns in 2007 and 2009 were similar, but very different from 2008, the year spring arrived late. I suspect the 2007 and 2009 gobbling patterns are close to what the average will be at the conclusion of the study in 2011. The late spring in 2008 had a tremendous effect, however, with peaks in gobbling occurring

almost two weeks later in April. For hunters, 2008 was a mixed bag—the peaks in gobbling were much lower than in 2007 and 2009, but the late spring resulted in more gobbling *during* the hunting season, weeks 6, 7 and 8. Our most recent memory is of the 2009 season. Gobbleteers heard as

much gobbling as in 2007 during mid-April (the 5th week of the study), but then 2009 gobbling went into a freefall during the hunting season, with a slight bounce up during the last week of the season (Figure 1).

Fig. 1. Statewide summary of Missouri turkey gobbling during 2007–2009.

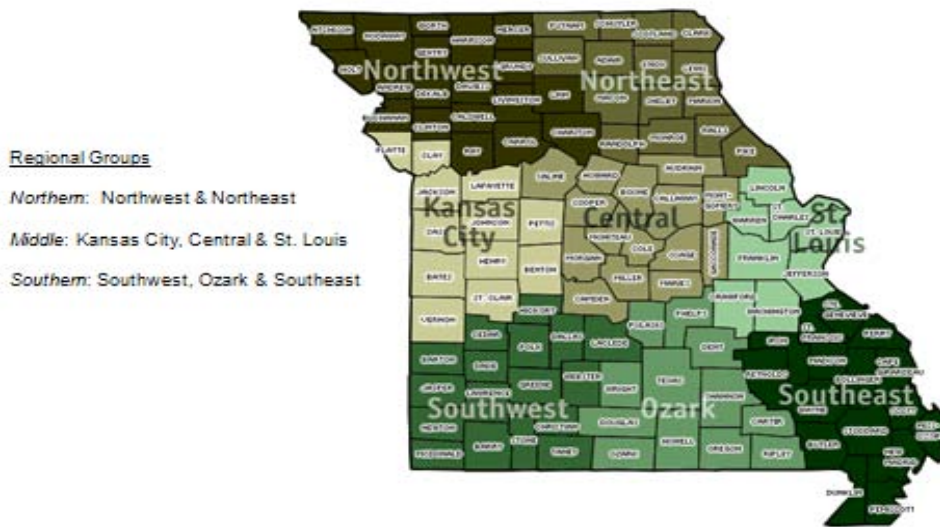


Highway 63 Effect

From Kirksville to Koshkonong, spring arrives at different times, and this affects turkey breeding behavior. Ozark hunters complain that turkeys are “gobbled out” before the season opens. To assess north-to-south differences in gobbling we divided

the state into a *northern* gobbling study region containing MDC’s Northwest and Northeast regions, a *middle* group containing Kansas City, Central and St. Louis regions and a *southern* group containing the Southwest, Ozark and Southeast regions (Figure 2).

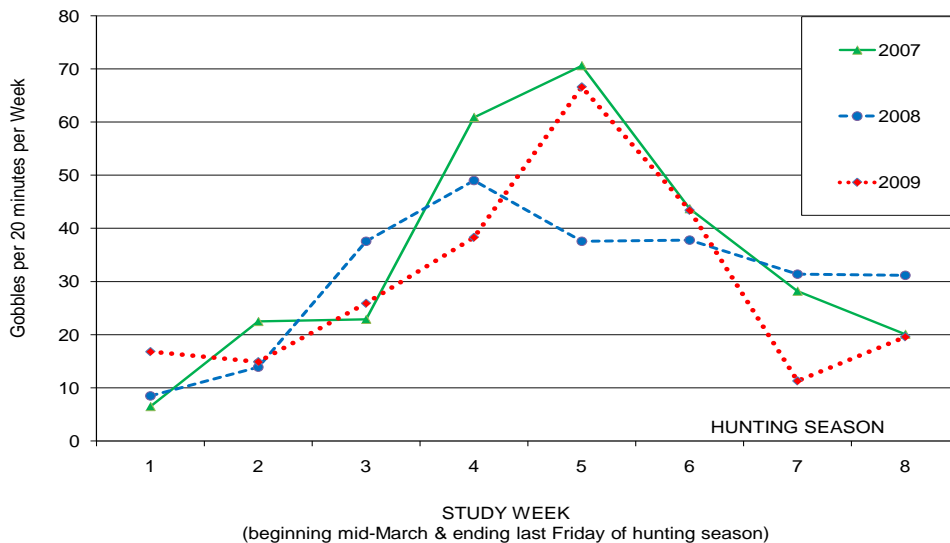
Fig. 2. Missouri Department of Conservation regions and gobble study regional groups



Northern Regions experienced much higher gobbling rates than did other parts of the state, with peaks in 2007 and 2009 of almost 70 gobblers per 20 minute observation during mid-April (Figure 3). Gobbling in the north seems to increase rapidly in early April,

reaching a peak in mid-April, and with the exception of 2008, dropping off quickly as the hunting season commences. In 2009 gobbling bounced back nicely from the rain-soaked 2nd week of the season (week 7).

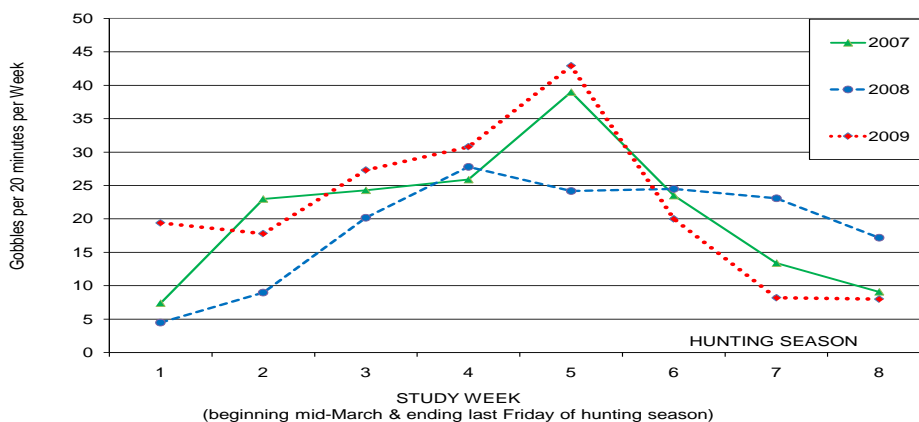
Fig. 3. Gobbling index for northern regions.



Middle Regions experienced gobbling rates about 45% lower than the Northern Regions, peaking around 40 gobblers per 20 minute observation in 2007 and 2009 (Figure 4).

The ups and downs in gobbling were similar between the Middle and Northern Regions, with distinct, high peaks in 2007 and 2009, and lower gobbling activity in 2008.

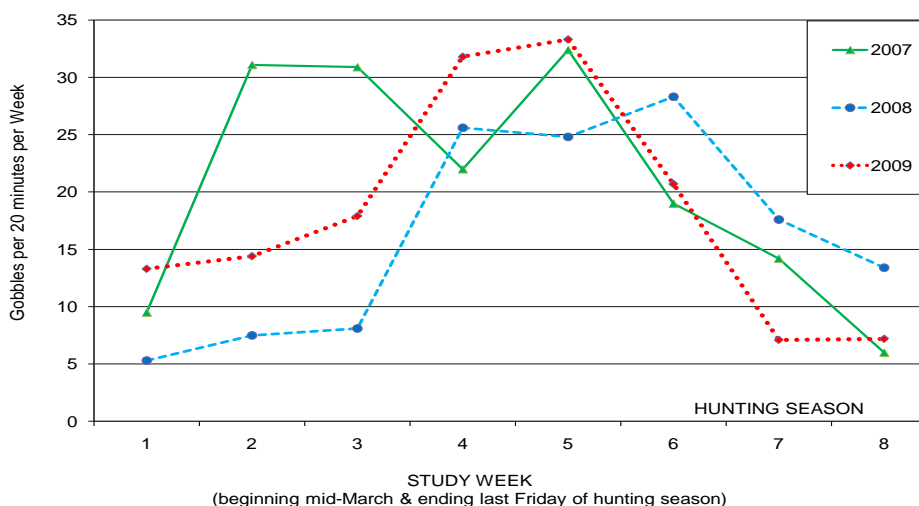
Fig. 4. Gobbling index for middle regions.



Southern Regions experienced the lowest gobbling rates, about 50% lower than the Northern Regions, peaking under 35 gobblers per 20 minute observation in 2007 and 2009 (Figure 5). Gobbling patterns in the southern regions best fit the classic ‘two-peaks’ phenomenon observed in past research, but

surprisingly the 2nd peaks were higher than the 1st peaks. The early spring in 2007 resulted in a rapid increase in gobbling, whereas the late spring in 2008 delayed gobbling about two weeks. This resulted in a substantial amount of gobbling during the 2008 hunting season.

Fig. 5. Gobbling index for southern regions.



This study was made possible by hundreds of volunteers, MDC workers such as Jamey Decoske, Giancarlo Rhodes and our internet designers and outdoor writers, and the George Clark Missouri State Chapter of the National Wild Turkey Federation (NWTF).

To encourage participation in the study, NWTF sponsored an annual drawing with one winner getting a commemorative shotgun or a lifetime hunting/fishing permit. This year's winner, J.D. Long, chose the lifetime permit. Thanks to all participants for making this study possible!